IN THE CLAIM

Claims 1 - 7 allowed claims.

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Previously Presented) A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide having a top surface facing a back surface of said display panel and a side surface receiving said light from said light source;

a reflector provided on a back surface of said light guide; and

an optical film of light transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, said optical film including a first surface having an optically rough structure for diffuse-transmitting said light from said light guide and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface to gather light passing through said second surface in a

direction toward said display panel, wherein a top angle of said isosceles triangle prisms of said optical film is in a range of about **90** degrees to about **120** degrees for flat, angle prism surfaces to gather light from the diffuse transmission and directionally distribute said light within a range defined by a given angle.

14. (Canceled)

15. (Previously Presented) The liquid crystal display device according to claim 13, wherein luminance of said gathered light is increased within and decreased outside of a desired viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of said display panel.

16. (Previously Presented) The liquid crystal display device according to claim 13, further including a second optical film positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films are oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

17. (Previously Presented) The liquid crystal display device according to claim 16, wherein said angle is perpendicular.

18. (Previously Presented) The liquid crystal display device according to claim 16, wherein a polarizer is positioned between said liquid crystal display panel and said two optical films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer.

19. (Previously Presented) The liquid crystal display device according to claim 13, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Canceled)

41. (Canceled)

42. (New) An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface for increasing illumination within a viewing angle of about 35 degrees in the vertical direction

and about 55 degrees in the horizontal direction wherein a top angle of said isosceles triangle prisms is a range of about 90 degrees to about 120 degrees.

43. (New) An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

44. (New) The optical film according to claim 42, wherein a polarizer is positioned between a liquid crystal display panel and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

45. (New) The optical film according to claim 42, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

46. (New) An optical film for use in a liquid crystal display having a front portion and a back portion, said optical film comprising:

diffusing means including an optically rough structure on a first surface of said film for diffuse-transmitting light illuminated proximal to said back portion of said display; and

refracting means on a second surface of said film including a plurality of isosceles triangle prisms arranged side-by-side for directionally distributing said diffuse-transmitted light toward said front portion of said display and for increasing luminance of light withing a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of said front portion of said display, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees.

47. (New) The optical film according to claim 46, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

48. (New) The optical film according to claim 46, wherein a polarizer is positioned between said front portion of said liquid crystal display and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

49. (New) A film for use in an optical system comprising a light source and a polarizer having a polarization axis, the film comprising a transparent material including a first surface and a second surface, said first surface having a structure including a plurality of isosceles triangular prisms arranged side-by-side for increasing luminance of light passing through said film in a direction corresponding to said polarization axis of said polarizer, and said second surface having an optically rough structure for diffuse transmitting light emitted by said light source, wherein a top angle of said isosceles triangle prims is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160 μm apart.

50. (New) The optical film according to claim 49, wherein said optical film is positioned within a liquid crystal display, said prisms having smooth surfaces for gathering diffuse transmitted light for increasing illumination within and decreasing illumination outside of a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of the liquid crystal display.

51. (New) The film according to claim 42, further including a variation in pitches between the tops of adjacent isosceles triangle prisms.

52. (New) The film according to claim 51, wherein said variation is less than 10% of the distance of the pitches.

53. (New) The film according to claim 43, further including a variation in pitches between the tops of adjacent isosceles triangle prisms.

54. (New) The film according to claim 53, wherein said variation is less than 10% of the distance of the pitches.

55. (New) The film according to claim 13, further including a variation in pitches between the tops of adjacent isosceles triangle prisms.

56. (New) The film according to claim 55, wherein said variation is less than 10% of the distance of the pitches.

57. (New) The film according to claim 46, further including a variation in pitches between the tops of adjacent isosceles triangle prisms.

58. (New) The film according to claim 57, wherein said variation is less than 10% of the distance of the pitches.

59. (New) The film according to claim 49, further including a variation in pitches between the tops of adjacent isosceles triangle prisms.

60. (New) The film according to claim 59, wherein said variation is less than 10% of the distance of the pitches.